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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,247	08/10/2001	Patrick W. Mullen	1571.2020-001	5637

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EXAMINER

VARGOT, MATHIEU D

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

V 10

Office Action Summary	Application No. 09/928,247	Applicant(s) MULLEN, PATRICK W.	
	Examiner Mathieu D. Vargot	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-14, 22 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-21 and 23-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/8/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Claims 17 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17, line 1, "12" should be --15-- for proper dependency. Also, in claim 24, the recitation "can emit" is indefinite in that it is unclear if a UV source is being specified or not. If so, applicant should rephrase the language as --emits--.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23, 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 8-137,375.

Japanese --375 discloses the instant pattern transfer structure comprising a radiation source (6) and a pattern (5) disposed between the source and a radiation curable material (4) for blocking a portion of the radiation so that the instant discernible pattern is formed on the material—ie, first and second cured portions (7, 8, 9) which are cured to different amounts. See the abstract. Note also that the material is disposed on a base (2). While the base is not disposed between the material and the pattern, it is submitted that this aspect constitutes a functional limitation which the prior art structure is inherently capable of performing. Certainly, the exact disposition of the base does not affect the structural limitations of the apparatus as claimed, but merely the positioning of the material being cured/base with respect to the structure. As to claims

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28 and 29, it is well known in the art that the degree of cure of a monomer/polymer sample dictates the material's density and refractive index. These properties are inherently a function of the degree of cure to the extent that if the material is the same and the degree of cure is different, then the index of refraction and density must inherently also be different, and hence claims 28 and 29 are anticipated by Japanese -375.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-21 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 8-137,375 in view of Martens (see Figs. 9 and 10A-10I; column 4, line 58; col. 5, lines 10-50).

Japanese -375 discloses the basic claimed method of forming a pattern in a radiation curable material connected to a base film lacking essentially the aspect of forming the pattern continuously as the material passes the radiation source. Martens discloses such continuous formation, as well as the instant materials to be cured (col. 4, line 58), application of UV light and also that the material is on a base which is between the lamp and the material—ie, the curing light passes through the transparent base. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the method of Japanese -375 as taught by Martens to facilitate formation of a continuously cured product. Also, note that Martens is directed to forming similar

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products to that made by the process of the primary reference—ie, holograms in the primary reference and Fresnel lenses, retroreflective prisms and holographic optical disks in the secondary reference. It is submitted that the methods are certainly analogous and that one of ordinary skill in the optical art would have knowledge of continuous operations as taught by Martens and be able to modify the method of Japanese –375 thus. Apparatus claims 23-26, 28 and 29 are hereby also rejected under 103, should applicant dispute the 102 rejection offered against claims 23, 28 and 29. In showing a transparent base, it is believed that Martens has rendered obvious any aspect of the base being between the curable material and the pattern. Indeed, it is rather conventional in the art to employ radiation-transparent bases or substrates so one has flexibility in applying the curing energy.

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

In view of the amendment, new art has been applied which renders applicant's comments directed to PCT –604 now moot. Also, in view of the new art, the allowance of claim 27 and objection to claims 28 and 29 has been rescinded. Needless to say, Japanese Patent –375 discloses forming first and second cured portions which are cured to a different degree such that a visible discontinuity can be seen between the portions.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki et al discloses forming decorative patterns on substrates by differentially curing a coating thereon and is cited as of interest.


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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on 571 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot
April 13, 2004


Mathieu D. Vargot
Primary Examiner
Art Unit 1732

4/13/04